

**I. AMENDMENTS TO THE CLAIMS:**

Please cancel claims 2, 9 and 10 without prejudice. Kindly amend claims 1, 3, 5, 14, 25 and 26 as follows.

The following claims will replace all prior versions of claims in the present application.

**Listing of Claims:**

1. (Currently Amended) A method of inspecting a target by tera-hertz wave spectroscopic measurement, comprising:  
a spectroscopic measurement step of pre-measuring a first spectrum matrix [S] of tera-hertz wave absorbencies of a target component for a plurality of frequencies ranging from about 1 THz to 3 THz;  
an object spectroscopic step of irradiating an object with tera-hertz waves of the plurality of frequencies to measure absorbencies of the object; and  
determining presence or absence of the target component in the object on the basis of the first spectrum matrix [S] of tera-hertz wave absorbencies and a second spectrum matrix [I] of tera-hertz wave absorbencies of the object; and  
a density calculation step of calculating a target density [P] on the basis of the first spectrum matrix [S] of tera-hertz wave absorbencies and the second spectrum matrix [I] of tera-hertz wave absorbencies of the object.

2. (Cancelled)

3. (Currently Amended) A method of inspecting a target according to claim 1 ~~claim 2~~, wherein the target spectroscopic step comprises a step of two-dimensionally scanning the object with the tera-hertz waves to measure the two-dimensional distribution matrix [I] of

absorbency of penetration light,

and the density calculation step comprises a step of calculating the two-dimensional distribution matrix [P] of the target density, wherein tera-hertz waves of N number of different wavelengths are used for M number of targets, N being equal to or larger than M, wherein

when N is equal to M, the two-dimensional distribution matrix [P] of the target density is calculated by  $[P] = [S]^{-1}[I]$ ,

and when N is larger than M, the two-dimensional distribution matrix [P] of the target density is calculated by  $[I] = [S][P]$ , using a least square method.

4. (Previously Presented) A method of inspecting a target according to claim 3, further comprising a step of two-dimensionally displaying the two-dimensional distribution matrix [P] of the target density.

5. (Currently Amended) A method of inspecting a target according to ~~claim 1~~claim 2, wherein tera-hertz waves of N number of different wavelengths are used for M number of targets, N being equal to or larger than M, wherein

when N is equal to M, the two-dimensional distribution matrix [P] of the target density is calculated by  $[P] = [S]^{-1}[I]$ ,

and when N is larger than M, the two-dimensional distribution matrix [P] of the target density is calculated by  $[I] = [S][P]$ , using a least square method.

6. (Previously Presented) An apparatus for inspecting a target using tera-hertz wave spectroscopic measurement, comprising:

a tera-hertz wave generation device that generates tera-hertz waves of a plurality of wavelengths;

a two-dimensional scan device that scans an object with the tera-hertz waves of the

plurality of wavelengths;

a spectroscopic measurement device that measures a two-dimensional distribution matrix [I] of light absorbency of the object; and

a target density calculation device that calculates a two-dimensional distribution matrix [P] of a target density on the basis of a pre-measured spectrum matrix [S] of light absorbency of a target and the two-dimensional distribution matrix [I] of light absorbency.

7. (Previously Presented) An apparatus for inspecting a target by tera-hertz wave spectroscopic measurement, according to claim 6, further comprising an image display device that two-dimensionally displays an image of the two-dimensional distribution matrix [P] of the target density.

8. (Previously Presented) A method of inspecting a target according to claim 3, further comprising a step of two-dimensionally displaying the two-dimensional distribution matrix [P] of the target density.

9. (Cancelled)

10. (Cancelled)

11. (Previously Presented) A method of inspecting a target according to claim 1, wherein determination of the presence or absence of the target component is performed without opening the object.

12. (Previously Presented) A method of inspecting a target by tera-hertz wave spectroscopic measurement, comprising the steps of:

pre-measuring a first spectrum matrix [S] of tera-hertz wave absorbencies of a target component for a plurality of frequencies ranging from about 1 THz to 3 THz;

irradiating an object with tera-hertz waves of the plurality of frequencies to measure absorbencies of the object; and

determining presence or absence of the target component in the object on the basis of the first spectrum matrix [S] of tera-hertz wave absorbencies and a second spectrum matrix [I] of tera-hertz wave absorbencies of the object.

13. (Previously Presented) A method of inspecting a target according to claim 12, further comprising the steps of:

calculating a target density on the basis of the first spectrum matrix [S] of tera-hertz wave absorbencies and the second spectrum matrix [I] of tera-hertz wave absorbencies of the object, wherein the target density is a two-dimensional distribution matrix [P], and pre-measuring the first spectrum matrix [S] comprises two-dimensionally scanning the object with the tera-hertz waves to measure a two-dimensional distribution matrix [I] of absorbency of penetration light; and

two-dimensionally displaying the two-dimensional distribution matrix [P] of the target density.

14. (Currently Amended) A method of inspecting a target according to ~~claim 12~~ claim 13, wherein tera-hertz waves of N number of different wavelengths are used for M number of targets, N being equal to or larger than M, wherein

when N is equal to M, the two-dimensional distribution matrix [P] of the target density is calculated by  $[P] = [S]^{-1}[I]$ ,  
and

when N is larger than M, the two-dimensional distribution matrix [P] of the target density is calculated by  $[I] = [S][P]$ , using a least square method.

15. (Previously Presented) A method of inspecting a target according to claim 12, wherein determination of the presence or absence of the target component is performed without opening the object.

16. (Previously Presented) An apparatus for inspecting a target by tera-hertz wave spectroscopic measurement according to claim 6, wherein tera-hertz waves of N number of different wavelengths are used for M number of targets, N being equal to or larger than M, wherein the target density calculation device calculates the two-dimensional distribution matrix [P] as follows:

when N is equal to M, the two-dimensional distribution matrix [P] of the target density is calculated by  $[P] = [S]^{-1}[I]$ ,

and

when N is larger than M, the two-dimensional distribution matrix [P] of the target density is calculated by  $[I] = [S][P]$ , using a least square method.

17. (Previously Presented) An apparatus for inspecting a target by tera-hertz wave spectroscopic measurement according to claim 6, wherein the target density calculation device determines a presence or absence of a target component in the object using the calculated two-dimensional distribution matrix [P] and without opening the object.

18. (Previously Presented) A method of inspecting a target according to claim 1, wherein the object is an article that is capable of containing the target component.

19. (Previously Presented) A method of inspecting a target according to claim 18, wherein the article is selected from the group consisting of an envelope, a parcel and a container.

20. (Previously Presented) A method of inspecting a target according to claim 18, wherein the target component is selected from the group consisting of a drug and bio-powder.

21. (Previously Presented) A method of inspecting a target according to claim 12, wherein the object is an article that is capable of containing the target component.

22. (Previously Presented) A method of inspecting a target according to claim 21, wherein the article is selected from the group consisting of an envelope, a parcel and a container.

23. (Previously Presented) A method of inspecting a target according to claim 21, wherein the target component is selected from the group consisting of a drug and bio-powder.

24. (Previously Presented) An apparatus for inspecting a target by tera-hertz wave spectroscopic measurement according to claim 17, wherein the object is an article that is capable of containing the target component.

25. (Currently Amended) An apparatus for~~A method of~~ inspecting a target by tera-hertz wave spectroscopic measurement according to claim 24, wherein the article is selected from the group consisting of an envelope, a parcel and a container.

26. (Currently Amended) An apparatus for~~A method of~~ inspecting a target by tera-  
hertz wave spectroscopic measurement according to claim 24, wherein the target component  
is selected from the group consisting of a drug and bio-powder.